

SierraNet™ M168 Quick Start

Before Starting

Use this document for quick installation and setup. If you experience problems or need more information, see the *SierraNet M168 User Manual* on the Installation DVD-ROM or at the Teledyne LeCroy web site. For details about the latest software version, see the Readme file on the Installation DVD-ROM.



SierraNet M168 Protocol Analyzer

1 Introduction

The SierraNet M168 is Teledyne LeCroy's 10 Gigabit Ethernet and 16 Gigabit Fibre Channel Analyzer and Jammer platform. It has eight SFP+ 10 GbE / 16G FC ports. Up to 64 GB of capture memory allows for capturing of extensive line-speed data.

The SierraNet M168 ports allow signals to pass through without re-timing, ensuring that the test platform is as transparent as possible. The analyzer can be controlled either via a one (1) Gigabit Ethernet connection to the local network or via a USB connection. The SierraNet M168 provides the user with easy-to-understand control panel and LED indicators. Major features of the M168 include triggering on back-to-back events, use of counters within trigger conditions, and multi-state (up to 24) triggering and filtering state machines with four transitions per state.

The Net Protocol Suite software for controlling the analyzer and displaying the captured data installs on the latest Microsoft® Windows®. See the Readme file for the latest information on host-machine requirements.

2 Components

The analyzer package includes the following components:

- ♦ SierraNet M168 Analysis platform
- ♦ USB 3.0 cable, 1 meter
- ♦ USB 2.0 cable, 1.8 meter
- ♦ 1 Gigabit Ethernet cable, 10 feet
- ♦ Three prong AC power cord
- ♦ C13-C14 10A power cord, 2 meter
- ♦ Installation DVD-ROM with software and documentation

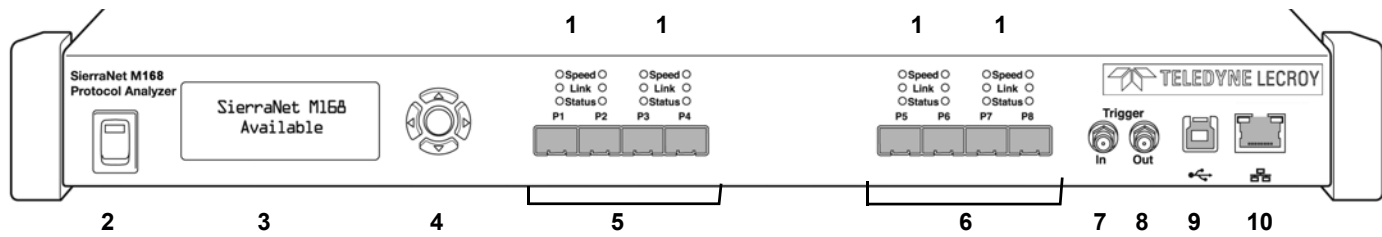
Please see the *SierraNet M168 User Manual* on the installation DVD-ROM for component specifications and further

3 Unpacking the Analyzer

Inspect the received shipping container for any damage. Unpack the container and account for each of the system components listed on the accompanying packing list. Visually inspect each component for absence of damage.

In the event of damage, notify the shipper and Teledyne LeCroy. Retain all shipping materials for shipper's inspection.

4 Front Panel Description



Features

The Analyzer has the following features on the front:

[1] LED Indicators for P1-P4 and P5-P8 for Speed, Link and Status:

Speed LEDs

The LEDs for SPEED illuminate as follows:

	GBE	Fibre Channel
Yellow	Reserved	4G/2G/1G FC
Green	10 GigE	8G FC
Blue	N/A	16G FC

Link Activity LEDs

Green	Network activity Detected
Yellow	Link up, no activity
No Color	No link

Status LEDs

Yellow Blinking	Waiting for trigger
Yellow Solid	Triggered
Red	Error detected
No Color	No Activity

Please see the *SierraNet M168 User Manual* for details on the Speed, Link and Status LEDs.

- [2] Power Switch
- [3] Status and Configuration LCD Display
- [4] Front Panel 5-Buttons keypad
- [5] SFP+ 10 GigE / FC connectors for ports 1-4
- [6] SFP+ 10 GigE / FC connectors for ports 5-8
- [7] External Trigger Input (Trigger In)
- [8] External Trigger Output (Trigger Out)
- [9] USB Port for host connectivity
- [10] Ethernet Port for network connectivity

5 Front Panel Buttons

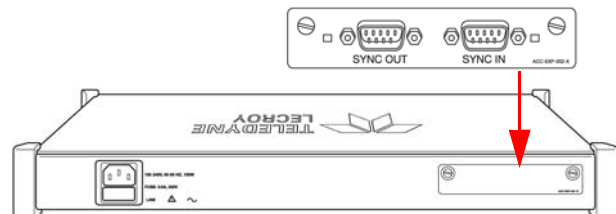
The following parameters can be viewed and/or configured directly on the front panel, using the display and 5 button keypad:

- Display of IP address
- Display of model name: "SierraNet M168"
- Connection status
- Display of unit name
- IP configuration
 - IP mode dynamic, or
 - IP mode static

6 Rear Panel Description Expansion Slot

The analyzer expansion slot at the back of the SierraNet M168 system can accommodate the SYNC Expansion Card that can be used to daisy-chain multiple analysis systems.

Note: Do not open the enclosure except for adding expansion cards. No user serviceable parts are inside.



7 Installing the Software

1. Insert the Installation DVD-ROM into the DVD drive on the host machine. The installation automatically starts setup, unless Auto Run is off. In that case, select the DVD-ROM from "My Computer" and click **Setup**. Follow the instructions to complete the installation.

Note: If you get an error message during installation of the drivers, consult your system administrator.

8 Setting Up and Connecting

Note: You must install the software before connecting the analyzer to the host machine for the first time.

To set up the analyzer:

1. Connect the analyzer to a 100V–240V, 50Hz–60Hz, power outlet and turn on the Power switch.
At power on, the analyzer will go through initialization as shown on the LCD display.
2. Connect the USB cable between the SierraNet M168 USB port and a USB port on the host machine. The host machine operating system detects the analyzer and loads the driver files. (See Section 10 for how to connect via Ethernet.)

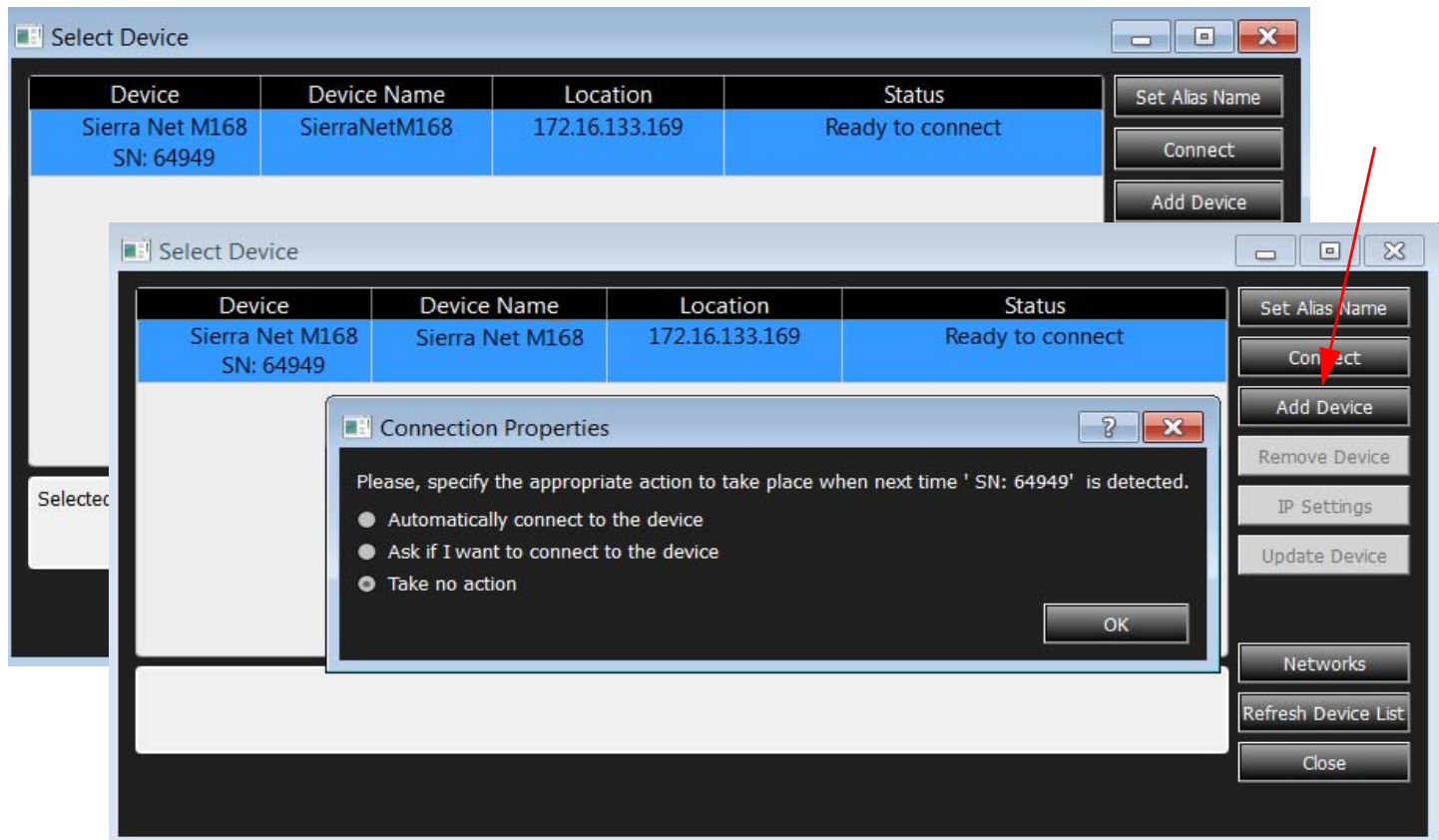
3. Connect your devices using SFP+ optics and a fiber cable suitable for your setup.
4. Connect the Ethernet or Fibre Channel devices to port pairs P1/P2, P3/P4, P5/P6 and/or P7/P8.

For an illustration of the cabling, see the Introduction chapter of the *SierraNet M168 User Manual*.

9 Starting the Application

To launch the software, select Start > All Programs > LeCroy > Net Protocol Suite.

Select **Menu > Setup > Device Management** (see screen capture on the right) to display the Device Management dialog. Click **Refresh Device List** (see screen captures below) to display all the devices on the network. Select a device and click **Connect**.



To start using the protocol analyzer and software, see the Protocol Analyzer chapter of the *SierraNet M168 User Manual*.

Connecting the Platform to the Host Machine via Ethernet

The SierraNet M168 platform can be connected to the host machine by using either a USB cable (as described in Section 8) or by using a 1 GbE connection as described below.

Connecting via Ethernet

To connect to the Ethernet network, the Sierra M168 must be assigned an IP address. The IP address can be assigned automatically, if the network has a DHCP server, or assigned manually using either the front-panel keypad and display or the Net Protocol Suite software.

IP Address Configuration

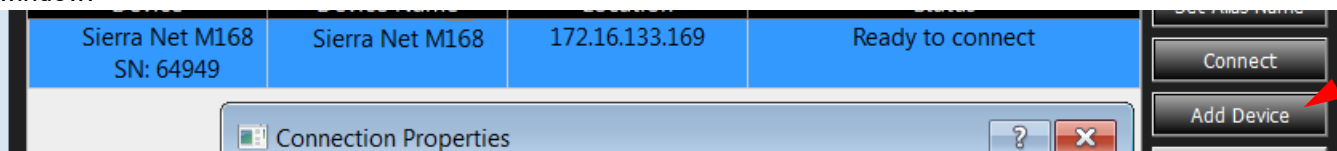
The IP address can be configured either via the front panel buttons or using the application when the analyzer is connected to the host machine via a USB cable.

When connected to a network, the analyzer can communicate with the DHCP server in order to obtain its IP address configuration.



Once the IP Address is configured, the SierraNet M168 analyzer is automatically detected by the application if the analyzer and the host machine on which the application is running are on the same Ethernet subnet. A list of all available units are displayed in the **Find Devices** dialog.

If the analyzer and the host machine are located on different subnets then the IP address of the analyzer needs to be configured manually in the application: Use the Add Device feature by clicking the **Add Device** button in the Select Device window.



11 Operating the SierraNet M168 System

It is recommended that you read the SierraNet M168 User Manual before operating the system, to get familiar with the capabilities and settings. The default capture mode is 'Easy Mode' on the Analyzer's Triggering/Filtering Settings.

Getting Started with Protocol Analysis

To use the SierraNet M168 software for protocol analysis, select **File > New Project** for a new protocol analyzer project or open one of the sample projects from the Examples folder (look for a .gep file).

Teledyne LeCroy Customer Support

Online Download

Periodically check the Teledyne LeCroy Protocol Solutions web site for software updates and other support related to this product.

Web: teledynelecroy.com/tm/software/PSG

E-mail: psgsupport@teledyne.com

Support: teledynelecroy.com/support/contact



Trademarks and Servicemarks

LeCroy and SierraNet M168 are trademarks of Teledyne LeCroy. Microsoft and Windows are registered trademarks of Microsoft Inc. All other trademarks are property of their respective companies.

Changes

Product specifications are subject to change without notice. Teledyne LeCroy reserves the right to revise the information in this document without notice or penalty.